

ARIZONA MINER---Supplement.

Prescott, Arizona, June 5, 1874.

TELEGRAPHIC.

Special Dispatches to the Arizona Miner,
By Western Union and U. S.
Military Lines.

Foreign and Domestic.

Washington, May 29.—The House is engaged in the discussion of the bill to reduce the force of the army. Nesmith, of Oregon, made a strong speech in which he protested against the continual interference with the Army organization as tending to drive good officers out of the service. He said that Congress had better at once abolish the Army and let the Indians take possession of the frontiers.

The committee on elections of the House will report in favor of the expulsion of Delegate Cannon, of Utah. The ablest lawyers claim that only a majority vote will be necessary to expel, because a delegate is not a Constitutional officer.

Philadelphia, May 29.—The death of Edgar Thompson created a sensation in financial and railroad circles, although the event was not unexpected—Mr Thompson having been in a very low state of health for some time. The office of the Pennsylvania Central is draped in mourning. There will be a meeting of the board of directors to-night and it is thought that Tom Scott will be elected president to succeed Thompson.

St. Louis, May 29.—A severe wind storm passed over the city yesterday, inflicting damage to the amount of \$50,000.

San Francisco, May 29.—Gold in New York, 112½. Greenbacks in San Francisco, 89½.

[Owing to the Eastern lines being down, there is no Eastern news of consequence.]

Washington, May 30.—The army reduction bill passed the House to-day. Vote stood 119 to 104.

Sutter Creek, May 30.—Last night, at the consolidated Amador mine the cage fell seventeen hundred feet. Five miners killed.

San Francisco, May 30.—A reporter of the Chronicle interviewed Cyrus W. Field, who says he is here for the purpose of talking over Pacific cable matters thoroughly with Californians. He is wedded to the project and there is no doubt but that the cable will be laid and successfully operated. When asked which route would be used, Mr. Field replied, "The southern one, by all means, the northern route is too cold and stormy; the southern route is longer, but in every other respect it is more desirable." Mr. Field contemplates running a cable from Honolulu to Australia. Also, he says the company will have their own overland line to the East, so as to facilitate the business of the cable.

The local option election took place at Oakland, Cal., to-day. There was a very spirited contest; the temperance people worked hard and it is thought "No License" carries the day.

Decoration Day was generally observed. Gold in New York 112½. Greenbacks in San Francisco, 89½ and 89¼.

Salinas City, Cal., May 28.—At Sargent's Station Judge Parker, county judge of Monterey county, with five men, boarded the mail car to assist the Sheriff to protect Vasquez. They arrived safe at 10 minutes to 3 o'clock and were met at the depot by a large crowd. There were no noisy demonstrations and ten minutes later he was lodged in jail. About 3,000 people have visited him since his arrival, and the jail is still thronged with them.

Washington, May 28.—The Pacific Railroad Committee, a long time after the reference to them of Luttrell's resolution to investigate the C. P. Contract and Finance Company, fixed a day for hearing him. The first postponement was at his request, on account of sickness, and the second was to await the arrival of important documents from California, of which telegraphic notification was meanwhile received. The meetings of the committee were occupied by miscellaneous business which caused a delay of two weeks more before they could again meet. The chairman, Sawyer, informed Luttrell that he had postponed hearing him for another week. Luttrell complained of this to several members of the committee, who accordingly carried a motion to hold special meeting the following day. His argument was then heard.

The Springfield Republican says that New England Senators could have headed off "inflation" by agreeing to equalize the national bank circulation between New England and the West. It was a case of self-interest. New England had more than her share and would not give it up.

It is said that Senator Sargent will soon introduce a bill to distribute enlisted negroes among the white regiments, so as not to keep them in distinct squads or companies.

REFINING.

Separation of Gold and Silver from Lead.

But little is known, by those not engaged in the business, of the methods employed in this country for separating gold and silver from impure lead; and we believe the following facts, gathered by our reporters, will be found of interest:

Two grades of impure lead are imported from Utah to Eastern States for refining. The impurities are gold and silver, which communicate a superior hardness to the lead, and also increase its fusibility. These ingredients, however, do not exist in sufficient proportion to warrant the application of the cupel process, or rather the loss of lead would be so great as to make the operation too expensive. The lowest grade contains 80 ounces of silver and one of gold to the ton; the other grade, known as the B. C. M. bullion contains 120 ounces of silver and 4 of gold per ton of bullion. Besides these components, certain proportions of antimony and occasionally a trace of arsenic enter into the composition of the bullion.

The bullion is first placed in kettles and melted to refine it. In this process the dross, which rises to the surface of the metal during the melting, contains the greater part of the impurities, such as antimony, bismuth, etc. This dross is afterward refined separately in an appropriate furnace. This having been removed, the melted metal is drawn off into a larger kettle. It is thence removed to other kettles, and a certain proportion of zinc added, the quantity bearing a fixed ratio to the quantity of silver already in the metal. In the working of each sample of bullion a preliminary assay is necessary to determine the proportion of silver.

When the metal is melted with the zinc, a slow fire is employed; and, as the process goes on, an alloy of silver and zinc rises to the surface. The latter is skimmed off and placed in a plumbago crucible, provided with a neck similar to a retort. The crucible is then placed in one of Du Faur's furnaces, which is so arranged that it can be tilted by the aid of a wheel attached to the furnace. The zinc is here distilled off, and condenses in the tube or neck, which is attached to the crucible. A part of the zinc is driven off as oxide, and this is lost, but about two-thirds of it sublimes in the neck of the crucible. When the tube is removed the zinc is withdrawn therefrom, and used in a similar operation. It will be remembered that silver melts at about the same temperature at which zinc is volatilized.

The metal remaining in the crucible consists of gold, silver and lead, the latter in small quantity. This having been withdrawn, the precious metals are separated from the lead by cupellation. The resulting gold and silver are then run into ingots, and the silver removed by nitric acid, or by whatever method may be most convenient. In this mixture of gold and silver, gold forms from one-half to one and one-half per cent. Some idea of the magnitude of the operation may be formed from the following facts regarding a large establishment. They claim a weekly production of silver of about 12,000 ounces, and a proportionate quantity of lead. Generally, the process returns about 80 per cent. of the lead which was in the bullion at the commencement of the operation. They use cast iron kettles in the process of separating the silver from the lead by the aid of zinc, each capable of holding two tons of bullion. Twelve of Du Faur's tilting furnaces are used, two capable of a charge of six tons each, one of twelve tons, and one of sixteen tons.—[Salt Lake Tribune.]

A temperance crusader, on her return from a pilgrimage to the beer shops, was seen to approach the pantry, and overheard singing:

Little drops of toddy,
Little grains of spice,
Don't they make a body
Feel so awful nice.

CHARGES AGAINST INDIAN INSPECTOR KEMBLE.—New York, May 9.—General Milroy, Superintendent of Indian Affairs for Washington Territory, who was removed at the instance of Indian Inspector Kemble, but was afterward reinstated, has preferred accusations against Kemble, charging him with writing libels in the Press against him (Milroy) and other officials. Kemble utterly denies the authorship of any such articles, and the Indian Bureau considers the charges trivial and unworthy of notice.

"Did you execute this instrument, without fear or compulsion from your husband?" blandly asked a judge! "Fear! compulsion! He compel me! You don't know me, Judge."

If there is any one time more than another when a woman should be entirely alone, says the Danbury man, it is when a full line of clothes comes down in the mud.

"Tompkins," said Johnson, "why don't you have your ears cropped? they are entirely too long for a man." "And yours," replied Tompkins, "ought to be lengthened; they are too short for an ass."

Gen Devin, formerly in command of Northern Arizona, is now stationed at Fort Bayard, New Mexico.

Delegate Maginnis of Montana stands a good chance of soon having a government assay office established at Helena, in his Territory. Arizona would like such an institution.

The nephew of the Czar of all the Russians is under arrest for stealing his mother's diamonds.

Chusas is now numbered among the things that were, in Santa Fe, New Mexico.

Las Cruces, and Silver City, in New Mexico, have been made money-order offices.

UTAH, COLORADO AND ARIZONA.

A Region of Canyons and Gorges.

Major J. W. Powell read a paper at the recent meeting of the Academy of Science giving an account of the progress made in the survey of the Colorado River and its tributaries by parties under the direction of the Smithsonian Institute, from which we make the following extracts:

The whole region embraced in the survey is a canon country. At the very beginning we have a series of canons through the Uintah Mountains, as the channel of Green river, Flaming Gorge, Kingfisher's canon, Red canon, the canon of Lodore, Whirlpool canon, and Split Mountain canons. Then Yampa canon, the canon along the lower course of the river of the same name, and many other tributary canons. Then below, in descending the river, the canon of Desolation, Gray canon, Labyrinth canon, and Stillwater canon, with their laterals; then Cataract canon, a profound chasm below the junction of the Grand and Green, then Narrow canon, which terminates at the mouth of the Dirty Devil river; many canons lateral in all these have also been explored.

Then Glen canon, a beautiful chasm carved by the river, in the bright red homogeneous sandstone of Triassic age. From the mouth of the Paria river to the mouth of the Colorado Chiquito is the beautiful gorge to which we have given the name of Marble canon. The walls are of limestone, and near the foot are of a crystalline structure which receives a beautiful polish; white, gray, slate color, pink, brown, and saffron-colored marbles are here found, carved and fretted by the waves of the river, and polished by the floods of sand which are poured over the walls of the canons, which have assumed architectural forms on a giant scale, an appearance of great beauty and grandeur.

Then we have the Grand canon, the most profound chasm known on the globe. Were a hundred mountains, each as large as Mt. Washington, plucked up by the roots to the level of the sea and tumbled into the gorge, they would not fill it.

Perhaps the most wonderful of the topographic features of this country are the lines of cliffs, escarpments of rock separating upper from lower regions by bold, often vertical and impassable barriers, hundreds or thousands of feet high and scores or hundreds of miles in length. I will enumerate some of the more important. First, we have the Brown cliffs, an escarpment which forms the southern boundary of the plateau through which the canon of Desolation is carved; then the Azure cliffs, the southern escarpment of the plateau through which Gray canon is cut; then the Orange cliffs, a broken escarpment, which commences at the foot of the Sierra La Sal, on the eastern side of Grand river, past the Grand, then across the Green river, and then down in a southwesterly direction parallel to the Colorado river about fifty miles, and then turns again to the southeast, and crosses the Colorado, terminating in the slope of the Sierra La Sal, two or three scores of miles south of the initial point. Thus the head of the Colorado, the junction of the Grand and Green, is encompassed by a towering wall—the Sierra La Sal—on the east; on the northwest and south the Orange cliffs; on every side a facade of storm carved rocks is presented. The Indian name for this basin is *Tum-pin-wu-neir-tu-weap*, the land of standing rocks. Buttes, towers, pinnacles, thousands and tens of thousands strange forms of rock, naked rock of many different colors are here seen; so that before we had learned the Indian name we thought of calling it the Stone Forest or Painted Stone Forest; and these rocks are not fragments or piles of irregular masses, but standing forms, carved by the rain drops from the solid massive beds. Weird, strange and grand is the *Tum-pin-wu-neir-tu-weap*.

Mr. James, register of the U. S. Land office at Los Angeles, California, has given the following interpretation of the working clause in the Congressional mining law, which we print, as a reminder for the old time boys of Arizona:

Miners must perform \$100 of work on a claim of 1,500 feet, or less, each year. The time for the expenditure of the first annual amount required under the Act of 1872 is extended to the 10th day of June, 1874.

The work may be done at any time before the expiration of the year.

Claims located under the Act of 1872 must have \$100 worth of work done on them each year.

The editor of the Mining Life, of Silver City, New Mexico, having been threatened with a severance of limbs, extinguishment, etc., if he made mention of the names of certain offenders, gives the following for the benefit of those concerned:

We will only say, that as a public journalist, we shall do our duty by our readers without fear or favor, and that if we properly understand our position and duties, they are to expose and denounce violators of law, order and decency, who-soever they may be. We shall do this, and are responsible individually for every line in this paper.

Speaking of a thunder-shower on the 4th instant, the Forest Grove (Oregon) Independent says: down it came in hail that shot straight before it like bullets from the armies; then it turned to rain which fell in floods, while the hovering lightning shook his fiery wings over the forests and the live thunder leaped from valley to valley. Leabo (the old gentleman) got caught out with a linen coat on and he got wet. We thought when we read the first sentence that the writer would have difficulty in sustaining himself.—[Virginia (Nev.) Enterprise.]

"So you were born on the 1st of April," said a husband to a wife on her twenty-first birthday. "That's what all my friends think." "And why are they so unanimous on that point?" pursued he. "On account of my choice of a husband," was the reply.